

The disclosure was objected to because certain informalities detailed in paragraph 1 of the official action. In response, Applicant has amended the figures and specification to address the detailed issues. Drawing corrections are shown in red ink.

(2)

The drawings were objected to because the “ozonator” as recited in claim 11 is not shown in the figures. In response, Applicant has amended the figures and specification to overcome the objection. Drawing corrections are shown in red ink.

(3)

Claims 1-12 and 26-29 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The issues are specifically addressed in paragraph 3 of the official action.

In response, Applicant has amended the claims to remove the asserted indefinite nature, as specified. However, Applicant does not find “the condensing loop” in claim 1, as specified in the rejection.

(5)

Claims 1-10 and 26-29 were rejected under 35 USC §103(a) as being unpatentable over WO 98/31636 McKay in view of Jansen. It is asserted in the official action that McKay discloses the structure of the cooling and water treatment systems substantially as claimed. However, differ in that McKay fails to recited a titanium electrode coated with ruthenium (actually Jansen teaches a mixture of ruthenium oxide and titanium oxide), but, it is asserted, Jansen discloses that it is known in the art to utilize a titanium electrode with an iridium or ruthenium coating in a system for disinfecting water and it would have been obvious to one skilled in the art to modify the system of McKay in light of Jansen.

Applicant traverses. The rejection fails because there insufficient motivation to make the combination. Jansen’s apparatus deals with a different kind of

“water treatment”. Jansen teaches disinfecting water for pools and drinking by using a introduction of NaCl to produce chlorine, which is released into the water.

Water is treated for many different reasons and in many different conditions. Different purposes and different condition require different treatment systems. Water treatment systems are not necessarily analogous just because they all treat water. The system used in Jansen is used to treat relatively clean water by introducing chlorine and at the same time attempting to balance the pH to acceptable levels. The cooling water system having a condensing water loop, as claimed, deals with water which is hostile. The problems and purposes differ. Such water to be treated involves a greater current density and has a large amount of minerals and metals. No NaCl is added to produce chlorine, as taught in Jansen, which is a chlorine generator. The present system oxidizes the unwanted items, which include metals and minerals, so that they precipitate out and are filtered. One skilled in the art would not therefore be motivated to make the combination as spelled out in the rejection. Withdrawal of the rejection is therefore respectfully requested.

With regard to claims 26-29, it is asserted in the official action that the intended use of the system fails to further limit the structure of the recited system.

For the reasons stated above, claims 26-29 are similarly not obvious. Further, the intended use does limit the structure when elements of the structure of the system which define the intended use are in the claim, as with the present claim. The claimed invention claims an evaporating cooling system of the type blowing air over a wet surface. Withdrawal of the rejection is respectfully requested.

(6)

Claims 11 and 12 were rejected under 35 USC §103(a) as being unpatentable over WO 98/31636 McKay in view of Jansen and further in view of Humphrey et al.

Dependent claims 11 and 12 are not obvious in light of the cited references for the reasons stated above in regard to paragraph 5 of the official action, among others.

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Applicant believes the claims to be in condition for allowance. Early and favorable action thereon is requested. If there are further issues to discuss, the Examiner is urged to contact the undersigned at 952-563-3008.

Respectfully submitted,

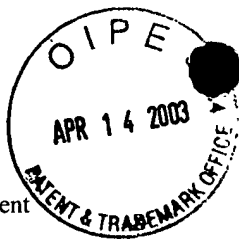
VIDAS, ARRETT & STEINKRAUS, P.A.

Date: April 7, 2003

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*Version with markings to show changes made*

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***In the Figures:***

Please replace figures 2-4 and 13 with the accompanying replacement figures, showing changes in red ink.

***In the Specification:***

*Please replace the paragraph on page 15, starting on line 12, with the following:*

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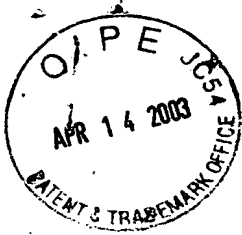
Figures 7a-c show a preferred configuration of the components of the WTA in Figures 2-3. Figures 7a & 7b show the preferred configuration of the skid, including the plumbing, filter, electronics and pump. Figure 7c shows an internal side view of the electrode chamber, the electronics and the pathway of the water to be treated. As the water is diverted from the loop it enters the WTA at the pump 50 intake 1 and flows through pump 50, via a flowswitch 62, which pumps the water up into a pressure differential valve (PDV) 52, or control box, which diverts the untreated water down through an optional multimedia sediment filter tank 54. As the filtered water exits the filter 54 the PDV 52 diverts the waste water out through an exit (not shown) 7 and the treated water is diverted through ball valve 64 and flowswitch 66 through two separate electrode chambers 55, the first of which includes a pair of electrodes 56 at least one of which comprises a plasma fused iridium coated titanium electrode or, preferably, a titanium electrode which has been coated with ruthenium. The second electrode chamber contains a pair of electrodes 58 formed of copper. The electrode chambers are controlled by electronics 60 and a timer 68, further discussed below, which also controls the filter 54 and the pump 50. After the second electrode chamber, the filtered and treated water is returned to the condensing loop via outlet 4 for discharge over the cooling tower surfaces and circulation through the condensing water loop. The piping is preferably one inch PVC piping.

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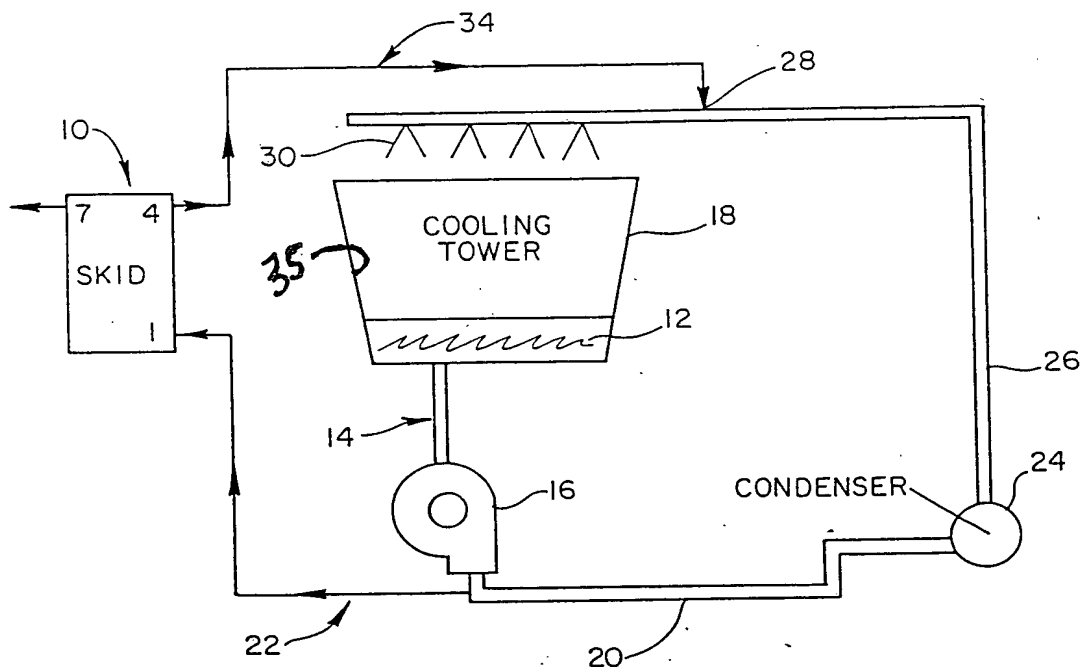
***In the Claims:***

*Please amend the claims as follows:*

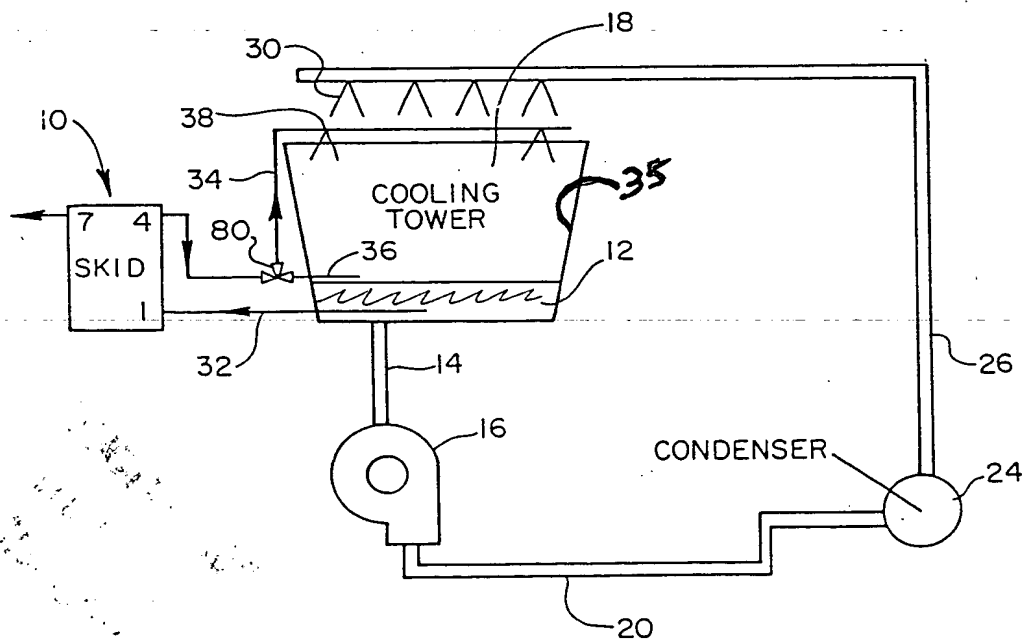
1. (Amended) A cooling water system having a condensing water loop, comprising:
  - a condenser system;
  - a cooling tower having water sides surfaces and a basin; and
  - a water treatment apparatus comprising:
    - a pump having:
      - an inlet port and an outlet port, said inlet port being connected to an incoming water line for supply water to be treated, drawn from the condensing water loop of the cooling water system;
    - a first electrode ionization chamber comprising:
      - an inlet port and an outlet port, said pump outlet port communicating with said first electrode ionization chamber inlet port; and
      - two ion-producing electrodes spaced apart, wherein at least one of said ion-producing electrodes comprises a titanium electrode coated with ruthenium; and
    - a second electrode chamber comprising:
      - two ion-producing electrodes spaced apart; and
      - an inlet port and an outlet port;
- wherein the electrode chambers communicate with the condensing water loop such that water in the loop is circulated through the electrode chambers.
4. (Amended) A system according to Claim 3, wherein said first electrode ionization chamber outlet port is connected to said second electrode chamber inlet port, wherein the outlet port of said second electrode chamber is connected to the condensing water loop to enable water discharged from the apparatus to be dispersed uniformly and completely over the water side surfaces of the cooling tower.
26. (Amended) An evaporative cooling system of the type blowing air over a wet surface, the improvement comprising:
  - oxidation apparatus for oxidizing ~~the~~ water prior to supplying the water to the evaporative cooling system, wherein the oxidation apparatus utilizes a titanium electrode coated with ruthenium, and
  - ionization apparatus for ionizing the water with copper ions prior to supplying the water to the evaporative cooling system.

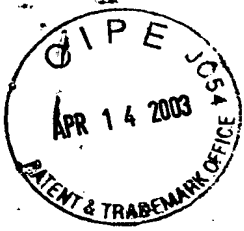


*Fig.2*

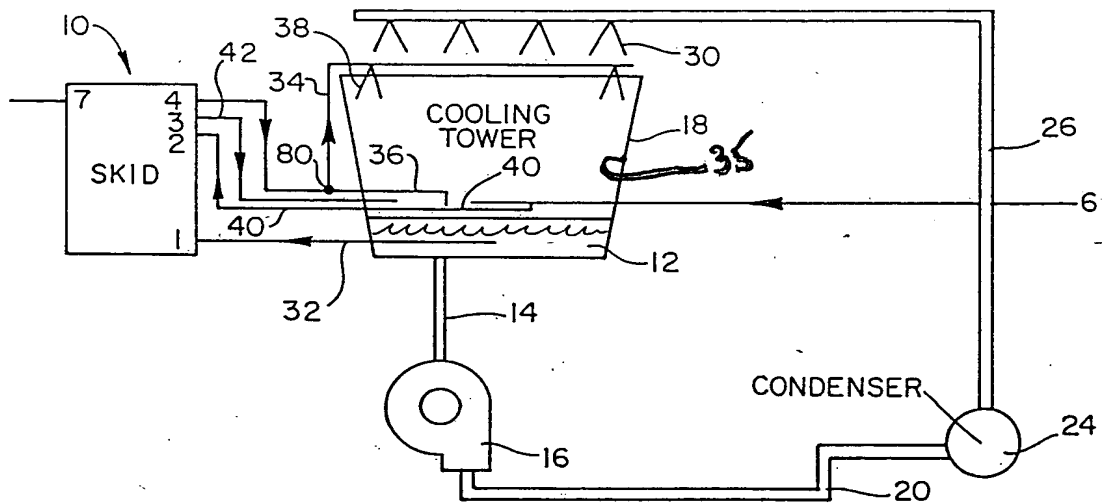


*Fig.3*



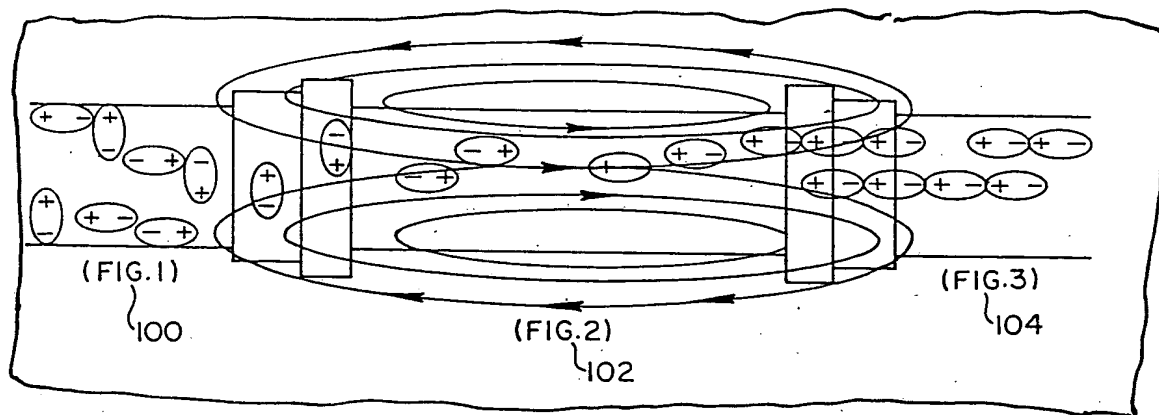


*Fig.4*





*Fig.13*



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